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STAAS & HALSEY LLP			RAMPURIA	RAMPURIA, SATISH	
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			2124		

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Please find below and/or attached an Office communication concerning this application or proceeding.

- 6						
		Application No.	Applicant(s)			
		09/767,857	HASHIMOTO ET AL.			
	Office Action Summary	Examiner	Art Unit			
		Satish S. Rampuria	2124			
	The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply					
A SHOTHE I  - Exter after - If the - If NO - Failu Any I	ORTENED STATUTORY PERIOD FOR REPL MAILING DATE OF THIS COMMUNICATION. Insions of time may be available under the provisions of 37 CFR 1. SIX (6) MONTHS from the mailing date of this communication. Period for reply specified above is less than thirty (30) days, a replay period for reply is specified above, the maximum statutory period reto reply within the set or extended period for reply will, by statutively received by the Office later than three months after the mailing and patent term adjustment. See 37 CFR 1.704(b).	136(a). In no event, however, may a reply be tirely within the statutory minimum of thirty (30) day will apply and will expire SIX (6) MONTHS from e, cause the application to become ABANDONE	nely filed  /s will be considered timely. If the mailing date of this communication.  ID (35 U.S.C. § 133).			
Status						
1)	Responsive to communication(s) filed on 14 A	May 2004.				
,	This action is <b>FINAL</b> . 2b) This action is non-final.					
3)						
Dispositi	ion of Claims					
5)□ 6)⊠ 7)□	<ul> <li>4)  Claim(s) 1,3-7 and 10-21 is/are pending in the application.</li> <li>4a) Of the above claim(s) is/are withdrawn from consideration.</li> <li>5)  Claim(s) is/are allowed.</li> <li>6)  Claim(s) 1,3-7 and 10-21 is/are rejected.</li> <li>7)  Claim(s) is/are objected to.</li> <li>8)  Claim(s) are subject to restriction and/or election requirement.</li> </ul>					
Applicati	ion Papers					
10)⊠	The specification is objected to by the Examina The drawing(s) filed on <u>14 May 2004</u> is/are: a Applicant may not request that any objection to the Replacement drawing sheet(s) including the correct The oath or declaration is objected to by the E	)⊠ accepted or b)⊡ objected to e drawing(s) be held in abeyance. Se ction is required if the drawing(s) is ob	e 37 CFR 1.85(a). ojected to. See 37 CFR 1.121(d).			
Priority (	under 35 U.S.C. § 119					
<ul> <li>12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).</li> <li>a) All b) Some * c) None of: <ol> <li>Certified copies of the priority documents have been received.</li> <li>Certified copies of the priority documents have been received in Application No</li> <li>Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</li> </ol> </li> <li>* See the attached detailed Office action for a list of the certified copies not received.</li> </ul>						
2) Notice 3) Infor	nt(s)  ce of References Cited (PTO-892)  ce of Draftsperson's Patent Drawing Review (PTO-948)  mation Disclosure Statement(s) (PTO-1449 or PTO/SB/08  er No(s)/Mail Date	4) Interview Summary Paper No(s)/Mail D 5) Notice of Informal I 6) Other:				

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## Response to Amendment

1. This office action is in response to the amendment filed on 05/14/2004.

- 2. Claims 2 and 8-9 have been cancelled by applicant.
- 3. Claims 1, 3-7, and 10-21 are pending.

## Claim Rejections - 35 USC § 101 Utility

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

 Claim 7 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claim is non-statutory because it recites components of automatic program generating, representing functional descriptive material without a computer readable medium or computer implemented, program per se are not tangibly embodied. Claim 7 thus amounts to only abstract idea and is nonstatutory.

# Claim Rejections - 35 USC § 103

- 6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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7. Claims 1, 3, 4, 5, 6, 7, 10, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chigira above in view of Stack, US Patent No. 6,257,774.

#### As per claim 1, Chigira discloses:

- An automatic program generation apparatus for automatically generating a program (col. 1, lines 46-48 "provided an automatic program generation apparatus in a computer program development support system")
- that will perform a predetermined processing, comprising (col. 1, lines 49-50 "input information relating to manner of use of data");
- *a plurality of data structure resolution units* (col.2, lines 42-43 "a plurality of program part prototypes as a program part prototype library")
- that respectively include a model program (col. 1, lines 52-53 "a processing unit for generating program parts from the program part prototypes")
- for a corresponding data structure (col. 1, lines 54-56 "the input information is analyzed, one of the program part prototypes stored in the memory unit is selected in accordance with the analysis")
- peculiar to said predetermined processing (col. 2, lines 45-48 "the input information is analyzed, one of the program part prototypes stored in the memory unit is selected in accordance with the analysis (setting peculiar), and the selected program is modified in accordance with the analysis to generate a program"). It is interpreted that input information is a setting indicating which processor to select according to information.

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and a resolution unit for generating a program (col. 1, lines 52-53 "a processing unit for generating program parts from the program part prototypes") for performing said predetermined processing (col. 1, lines "63-64" program is generated based on the selected (predetermined) program part prototype") by acquiring resolution information relating to (col. 2, lines 39-40 "information relating to the manner of use of the data") said setting peculiar to said predetermined processing for the resolution logic (col. 2, lines 45-48 "the input information is analyzed, one of the program part prototypes stored in the memory unit is selected in accordance with the analysis (setting peculiar), and the selected program is modified in accordance with the analysis to generate a program") included in said model program in said data structure resolution unit corresponding to a selected data structure (col. 2, lines 51-56 "The program part to be generated is designated by the processing unit 22 which receives the data to be processed by the program and the information relating to the manner of use of the data from the input/output unit 21 through a general purpose text editor and analyzes it");

wherein said resolution unit comprises an analyser that analyzes said resolution logic included in said model program in said data structure resolution unit corresponding to the selected data structure (col. 2, lines 44-48 "a processing unit for generating a program part by analyzing the input information to the input/output unit 21, selecting one of the program part prototypes from the memory unit 23 in accordance with the analysis and modifying the selected program part prototype").

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Chigira does not explicitly prompts a user to input said resolution information for said resolution logic based on the analysis and synthesizing the model program and the acquired resolution information for the resolution logic.'

However, Stack discloses in an analogous computer system prompts a user to input said resolution information for said resolution logic based on the analysis (col. 5, lines 24-28 "The process 70 begins with the election of a user choice 72 to define the file structure 74, define a program structure 76, or create a field definition 78. With each of these choices, the user is prompted, and provided with starting text as appropriate, through a process that results in the production of definitions and text representing the user's further inputs" see fig. 5 and related discussion) and synthesizing the model program and the acquired resolution information for the resolution logic (col. 1, lines 54-63 "program synthesizers based on libraries of pre-established program parts have been proposed. A library based program synthesizer... program generator operates from defined data to select a best match of a program part prototype from a part prototype library. Each program part prototype stored by the library is predefined and statically maintained as part of the library until selection during program generation").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of prompting the user to get the input and synthesizing the program parts as taught by Stack into the method of automatic program generation as taught by Chigira. The modification would be obvious because of one of ordinary skill in the art would be motivated to have the user prompt for

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the input to generate the program by selecting the suitable program components as suggested by Stack (col. 3, lines 27-36).

As per claim 3, the rejection of claim 1 is incorporated and further Chigira discloses:

- the data structure resolution unit corresponding to the selected data structure is either a one or a various types of data structure (col. 4, lines 23-25 "Through the function, one program prototype can be flexibly applied to various data (structure) without addition or modification").

As per claim 4 the rejection of claim 1 is incorporated and further Chigira discloses:

- a first model program that prescribes a data structure comprising one or a

  plurality of record types (col. 3, lines 31-32 "After the analysis, the processing

  unit 22 prepares the data attribute analysis table shown in FIG. 5")
- and a link between record types if a plurality of record type exists, and that includes resolution logic for performing a setting for said predetermined processing as to said data structure (col. 3, lines 33-35 "the processing unit 22 selects one of the program part prototypes from the program part prototype library by referring to the analysis (predetermined settings) table");
- setting for said predetermined processing as to an operation, and that corresponds

  to a basic operation executed for said data structure (col.3, lines 24-28 "The
  input information designates the data declaration statement to be processed by the

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program, the manner of use of the data (class) and the key where the class designates the retrieval table").

## As per claim 5, Chigira discloses:

- An automatic program generation program embodied on a medium for automatically generating a program (col. 1, lines 46-48 "provided an automatic program generation apparatus in a computer program development support system") that will perform a predetermined processing, (col. 1, lines 49-50 "input information relating to manner of use of data") said automatic program generation program comprising:
  - relating to the manner of use of the data") said setting peculiar to said

    predetermined processing for the resolution logic (col. 2, lines 45-48 "the input
    information is analyzed, one of the program part prototypes stored in the memory
    unit is selected in accordance with the analysis (setting peculiar), and the selected
    program is modified in accordance with the analysis to generate a program")

    included in a model program in a data structure resolution unit corresponding
    to a selected data structure (col. 2, lines 51-56 "The program part to be generated
    is designated by the processing unit 22 which receives the data to be processed by
    the program and the information relating to the manner of use of the data from the
    input/output unit 21 through a general purpose text editor and analyzes it")
    wherein said data structure resolution unit (col.2, lines 42-43 "a plurality of
    program part prototypes as a program part prototype library") includes said

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model program (col. 1, lines 52-53 "a processing unit for generating program parts from the program part prototypes") for a corresponding data structure (col. 1, lines 54-56 "the input information is analyzed, one of the program part prototypes stored in the memory unit is selected in accordance with the analysis"), and said model program includes resolution logic for performing a setting peculiar to said predetermined processing (col. 2, lines 45-48 "the input information is analyzed, one of the program part prototypes stored in the memory unit is selected in accordance with the analysis (setting peculiar), and the selected program is modified in accordance with the analysis to generate a program"). It is interpreted that input information is a setting indicating which processor to select according to information.

- program parts from the program part prototypes") for performing said

  predetermined processing (col. 1, lines "63-64 "program is generated based on the selected (predetermined) program part prototype")
- wherein said resolution unit comprises an analyser that analyzes said resolution logic included in said model program in said data structure resolution unit corresponding to the selected data structure (col. 2, lines 44-48 "a processing unit for generating a program part by analyzing the input information to the input/output unit 21, selecting one of the program part prototypes from the memory unit 23 in accordance with the analysis and modifying the selected program part prototype").

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Chigira does not explicitly prompts a user to input said resolution information for said resolution logic based on the analysis and synthesizing the model program and the acquired resolution information for the resolution logic.

However, Stack discloses in an analogous computer system prompts a user to input said resolution information for said resolution logic based on the analysis (col. 5, lines 24-28 "The process 70 begins with the election of a user choice 72 to define the file structure 74, define a program structure 76, or create a field definition 78. With each of these choices, the user is prompted, and provided with starting text as appropriate, through a process that results in the production of definitions and text representing the user's further inputs" see fig. 5 and related discussion) and synthesizing the model program and the acquired resolution information for the resolution logic (col. 1, lines 54-63 "program synthesizers based on libraries of pre-established program parts have been proposed. A library based program synthesizer... program generator operates from defined data to select a best match of a program part prototype from a part prototype library. Each program part prototype stored by the library is predefined and statically maintained as part of the library until selection during program generation").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of prompting the user to get the input and synthesizing the program parts as taught by Stack into the method of automatic program generation as taught by Chigira. The modification would be obvious because of one of ordinary skill in the art would be motivated to have the user prompt for the input to generate the program by selecting the suitable program components as suggested by Stack (col. 3, lines 27-36).

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As per claim 6 the rejection of claim 5 is incorporated and further Chigira discloses:

- a first model program that prescribes a data structure comprising one or a

  plurality of record types (col. 3, lines 31-32 "After the analysis, the processing

  unit 22 prepares the data attribute analysis table shown in FIG. 5")
- and a link between record types if a plurality of record type exists, and that includes resolution logic for performing a setting for said predetermined processing as to said data structure (col. 3, lines 33-35 "the processing unit 22 selects one of the program part prototypes from the program part prototype library by referring to the analysis (predetermined settings) table")
- setting for said predetermined processing as to an operation, and that corresponds to a basic operation executed for said data structure (col.3, lines 24-28 "The input information designates the data declaration statement to be processed by the program, the manner of use of the data (class) and the key where the class designates the retrieval table").

#### As per claim 7, Chigira discloses:

- An automatic program generation method for automatically generating a program (col. 1, lines 46-48 "provided an automatic program generation apparatus in a computer program development support system") that will perform a predetermined processing, (col. 1, lines 49-50 "input information relating to manner of use of data") said automatic program generation program comprising:

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acquiring resolution information relating to (col. 2, lines 39-40 "information relating to the manner of use of the data") a setting peculiar to said predetermined processing for the resolution logic (col. 2, lines 45-48 "the input information is analyzed, one of the program part prototypes stored in the memory unit is selected in accordance with the analysis (setting peculiar), and the selected program is modified in accordance with the analysis to generate a program") included in a model program in a data structure resolution unit corresponding to a selected data structure (col. 2, lines 51-56 "The program part to be generated is designated by the processing unit 22 which receives the data to be processed by the program and the information relating to the manner of use of the data from the input/output unit 21 through a general purpose text editor and analyzes it") wherein said data structure resolution unit (col.2, lines 42-43 "a plurality of program part prototypes as a program part prototype library") includes said *model program* (col. 1, lines 52-53 "a processing unit for generating program parts from the program part prototypes") for a corresponding data structure (col. 1, lines 54-56 "the input information is analyzed, one of the program part prototypes stored in the memory unit is selected in accordance with the analysis"), and said model program includes resolution logic for performing a setting peculiar to said predetermined processing (col. 2, lines 45-48 "the input information is analyzed, one of the program part prototypes stored in the memory unit is selected in accordance with the analysis (setting peculiar), and the selected program is modified in accordance with the analysis to generate a program"). It is

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interpreted that input information is a setting indicating which processor to select according to information.

- program parts from the program part prototypes") for performing said

  predetermined processing (col. 1, lines "63-64 "program is generated based on the selected (predetermined) program part prototype")
- logic included in said model program in said data structure resolution unit corresponding to the selected data structure (col. 2, lines 44-48 "a processing unit for generating a program part by analyzing the input information to the input/output unit 21, selecting one of the program part prototypes from the memory unit 23 in accordance with the analysis and modifying the selected program part prototype").

Chigira does not explicitly prompts a user to input said resolution information for said resolution logic based on the analysis and synthesizing the model program and the acquired resolution information for the resolution logic.

However, Stack discloses in an analogous computer system prompts a user to input said resolution information for said resolution logic based on the analysis (col. 5, lines 24-28 "The process 70 begins with the election of a user choice 72 to define the file structure 74, define a program structure 76, or create a field definition 78. With each of these choices, the user is prompted, and provided with starting text as appropriate, through a process that results in the production of definitions and text representing the

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user's further inputs" see fig. 5 and related discussion) and synthesizing the model program and the acquired resolution information for the resolution logic (col. 1, lines 54-63 "program synthesizers based on libraries of pre-established program parts have been proposed. A library based program synthesizer... program generator operates from defined data to select a best match of a program part prototype from a part prototype library. Each program part prototype stored by the library is predefined and statically maintained as part of the library until selection during program generation").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of prompting the user to get the input and synthesizing the program parts as taught by Stack into the method of automatic program generation as taught by Chigira. The modification would be obvious because of one of ordinary skill in the art would be motivated to have the user prompt for the input to generate the program by selecting the suitable program components as suggested by Stack (col. 3, lines 27-36).

As per claims 10 and 13, The rejection of claim 6 is incorporated, and further, Chigira discloses:

- wherein said first model program prescribes a simple type data structure (col. 2, lines 52-53 "the data (simple type) to be processed")
- comprising one kind of record type (col. 3, lines 12-13 "the preparation of a table (matrix type) having data relating to the macro name")

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- and includes resolution logic for providing an attribute for the record (col.3, lines 14-16 "The processing unit 22 analyzes the input information of FIG.3 to prepare a data attribute analysis table shown in FIG. 5")

- and wherein resolution logic for providing a setting in accordance with said predetermined specification is embedded in said second model program (col.3, lines 24-28 "The input information designates the data declaration statement to be processed by the program, the manner of use of the data (class) and the key where the class designates the retrieval table")
- and said second model program is to execute at least addition, deletion, update, and search operations for said record (col.3, lines 14-16 "The processing unit 22 analyzes the input information of FIG.3 to prepare (at least addition, deletion, update) a data attribute analysis table shown in FIG. 5").
- 8. Claims 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chigira in view of Wahizaki, US Patent No. 5,212,634.

As per claims 11 and 14, the rejection of claim 6 is incorporated, and further Chigira does not explicitly discloses the data structure type is a slip type.

However, Washizaki discloses a slip type data structure (col.1, lines 42-43 "a slip processing program") with one kind of header record type (col. 2, line 67 "the sales slip number") one kind of detail record type (col. 2, lines 67-69 "unit goods price, number of goods sold 12, and total sales obtained by multiplying the unit goods price 11 by the number of goods sold") and links for linking said one header record type and one or a plurality of said detail record types, and includes resolution logic for providing

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attributes for the header record and the detail record (col.4, lines 1-7 "A generated process... indicates a process... slip number...found consistent of matched with ... slip number 16 at check step 3").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have an apparatus for automatically generating a program include a data structure of slip type as taught by Washizaki in corresponding to automatic program generation as taught by Chigira. The modification would be obvious because of one of ordinary skill in the art would be motivated to have data structure of slip to generate slips for with information.

The limitation of executing record, addition, deletion, and search operation is disclosed by Chigira as discussed in the rejection of claim 10.

9. Claim 12, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chigira in view of Webber et al, hereinafter called Webber, US Patent No. 5,331,546.
As per claims 12, 16 and 17, the rejection of claim 6 is incorporated, and further Chigira does not explicitly discloses the data structure is a type of time band, seat reservation, and plan as claimed.

However, Webber discloses the system to create itineraries using the data structure of time and reservation type (col. 5 lines 34-38 "a storage device... include a tariff file, a traveler file and a rules file... link... reservation system" and col. 6, lines 38-40 "reservation system to check seat availability for...flight found" and col. 7, lines 16-17 "the origin and destination locations and the time window or windows fro a trip). It is

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inherent that data structure is a plan type, which stores records. Because in order to process proper for a model or function it must access a record.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the use of data structure to make reservations as taught by Webber in the method for automatic generating program as taught by Chigira. The modification would be obvious because of one of ordinary skill in the art would be motivated to have a system to make reservation automatically as suggested by Webber (Abstract, "A travel planner... automatically construct... available seats for a traveler's").

The limitation of executing record, addition, deletion, and search operation is disclosed by Chigira as discussed in the rejection of claim 10.

10. Claims 18, 20, and 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chigira in view of Schneier, hereinafter called Schneier, US Patent No. 5,850,516.
As per claims 18, 20, and 21, the rejection of claim 6 is incorporated, and further Chigira does not explicitly discloses the data structure types of a composition, tree type or hierarchy.

However, Schneier discloses a system using tree base data structure (col. 6, lines 25-40 "The tree structure are a type of data structure... plurality of leaf nodes... predetermined mathematical operation... lower level nodes" and col. 6, lines 25-36 "a first level... plurality of leaf nodes... and a top level (or root)... It is ...higher level (closer to the root) node having as its children the lower level (Father from the root) nodes from ... higher level nodes derived").

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Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the system using tree and hierarchy type data structure as taught by Schneier in the method for automatically generating the program as taught by Chigira. The modification would be obvious because of one of ordinary skill in the art would be motivated to have a system using tree type database to analyze the security system as suggested by Schneier (col. 3, lines 10-15).

The limitation of executing record, addition, deletion, and search operation is disclosed by Chigira as discussed in the rejection of claim 10.

11. Claims 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chigira in view of Suzuki et al, hereinafter called Suzuki, US Patent No. 6,470,323.

As per claims 15 and 19, the rejection of claim 6 is incorporated, and further Chigira does not explicitly discloses the data structure types of a stock and pedigree as claimed.

However, Suzuki discloses system utilizing data structure of stock, and one kind record (col. 3, lines 1-8 "The database... stores... transaction information... tracking customer history... types of data structure... lists, tables" and col. 3, lines 15-16 "storage... storing records... relating... sales management").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have a data structure of types as explained above in a system as taught by Suzuki in corresponding to automatically generating the program as taught by Chigira. The modification would be obvious because of one of ordinary skill in the art would be motivated to have a record or array into the system to generate program as suggested by Suzuki (col. 1 lines 31-36).

The limitation of executing record, addition, deletion, and search operation is disclosed by Chigira as claimed in claim 10.

#### Response to Arguments

12. Applicant's arguments with respect to claims 1, 5, 6, 7, 11, 12, and 14-21 have been considered but are moot in view of the new ground(s) of rejection.

#### Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Satish S. Rampuria Patent Examiner Art Unit 2124 08/09/2004

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